PART 3. Strategies to expand or enhance modes of transportation

3.1 Extend and connect the pedestrian network of sidewalks and cross-walks

Objective: To create a safe, pedestrian-friendly environment.

Description: Guidelines for **sidewalks** include:

- On residential streets, at even modest urban densities, sidewalks should ideally be provided on each side of the street.
- If the buildings in a commercial area are located near the street and encourage pedestrian use, sidewalks on each side of the street are essential. No commercial area should be developed without sidewalks.
- A sidewalk should be provided on at least one side of an industrial street so that pedestrians are not forced to share the street with large trucks.

Sidewalks should be continuous throughout most designated growth areas and should be required in these and other high traffic areas as part of subdivision and site plan review regulations.

Appropriate sidewalk widths are a function of their expected use. In a residential area, a 4-foot sidewalk is minimally sufficient and a 5-foot sidewalk is preferred. In a commercial area, there needs to be space for both walking and window-shopping.

It is usually desirable to locate the sidewalk back from the curb or road edge using a planting strip between the roadway and the path. Pedestrian scale lighting along sidewalks improves actual and perceived safety for pedestrians.

A **crosswalk** is the portion of roadway designated for pedestrians to use in crossing the street. It may be marked or unmarked. A marked crosswalk serves two purposes:

- to warn motorists to expect pedestrians to cross the street and
- to indicate the preferred pedestrian crossing location.

National guidelines (NCHRP Report 562) can be used to select pedestrian crossing treatments for unsignalized intersections and midblock locations. Quantitative procedures in the guidelines use key input variables (such as pedestrian volume, street crossing width, traffic volume, etc.) to recommend one of four possible crossing treatment categories: (1) marked crosswalk; (2) enhanced, high-visibility, or "active when present" traffic control device; (3) red signal or beacon device; and (4) conventional traffic control signal.

A pedestrian refuge island, a raised island placed in the center of a street at an intersection or mid-block crossing, can help protect pedestrians from moving vehicles.

See Improving Pedestrian Safety at Unsignalized Crossings. TCRP Report 112/NCHRP Report 562.

PART 3. Strategies to expand or enhance modes of transportation

3.2 Provide for bicycle lanes

Objective: To create safe options for bicycles as an important means of transportation.

Description: Bike lanes are segments of a roadway designated by signing and pavement markings for exclusive bicycle use. Local streets and state highways need to provide safe travel and access for bicyclists. Only on neighborhood streets where speeds are 25 mph or lower should bicyclists share the same travel lane with cars. Otherwise, bike lanes should be considered where adequate right of way is available to better define travel lanes for bikes and cars.

Bike lanes not only provide a designated facility for bicyclists, but they also contribute to traffic calming by narrowing existing travel lanes and safety by increasing motorists awareness that bikes are allowed and encourages on the roadway. They create a more positive separation between bikes and cars within the roadway, and can also provide a barrier between cars and pedestrians on a sidewalk or path. Proper signage and pavement markings should be provided to inform motorists of designated bike lanes.

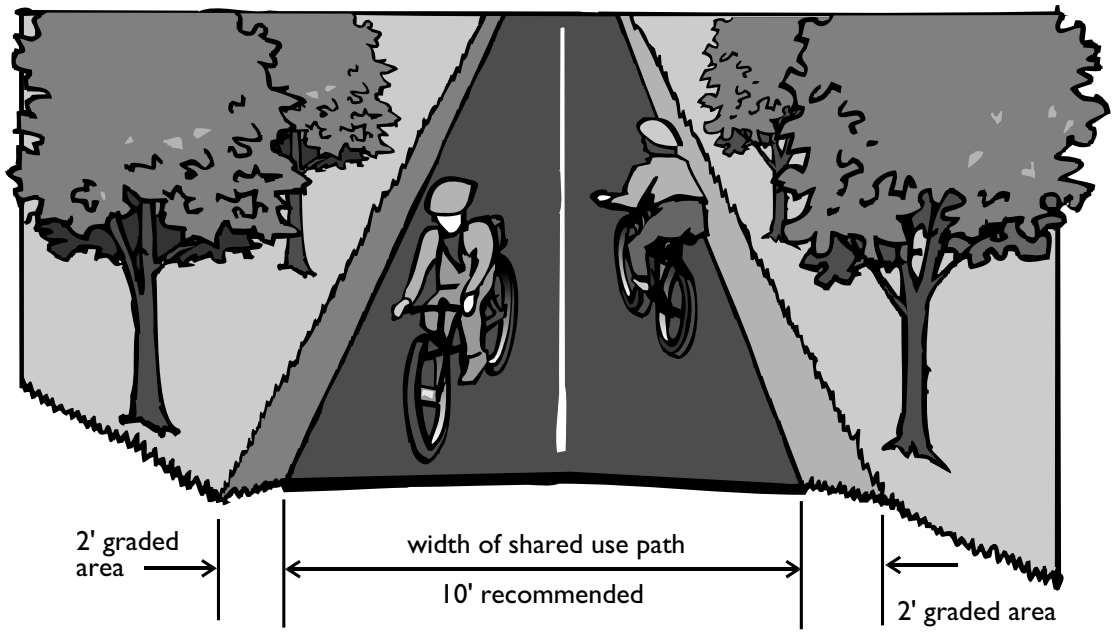
Elements of a bike lane within a right-of-way include:

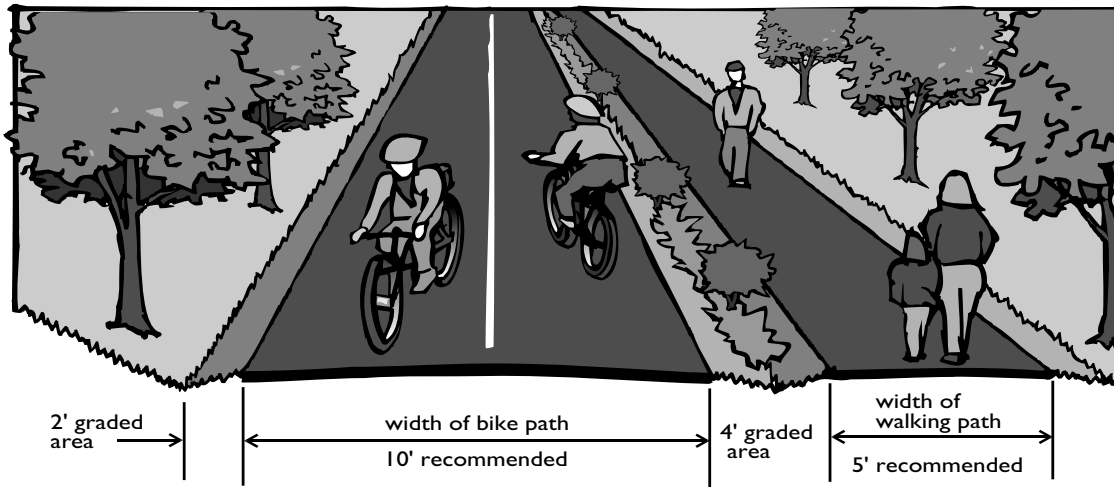
- 5-6' wide shoulder for one-way movement
- 8' or more for two-way movements separated by curb or islands
- Proper signage
- Distinct pavement markings
- Should be incrementally added to streets and state highways where right of way permits and speed limit is 30 mph or greater
- Best provided if the street is commonly used by bicyclists
- Should incrementally connect existing pathways to other destinations

Figure B-5 shows dimensions of off-street bike paths.

Figure B-5

Dimensions of off-street bike paths.





PART 3. Strategies to expand or enhance modes of transportation

3.3 Introduce or expand ride-sharing

Objective: To relieve peak hour demands on roads and on parking lots serving employers, downtowns, and similar destinations; and provide transportation choice to commuters.

Description: Ride-sharing includes carpools, van pools, and shuttle buses sponsored by employers or others. Carpooling requires conveniently located park-and-ride lots, which frequently also are used by van pools or shuttle buses.

Park and ride lots sponsored by the Maine Turnpike Authority and MaineDOT are located throughout the I-95 corridor and along a variety of state routes. Locations can be found at: http://www.exploremaine.org/parkandride/textlinks.htm.

If the community wishes to introduce a new park-and-ride lot, search for a site either adjacent to an interchange or close to a major intersection along a popular commuting route. If the community wishes to encourage greater use of existing park and ride lots due to congestion in town or city centers or to reduce the need for large off-street parking areas at major employer locations, consider an incentive program in which some of the off-street parking requirements are reduced if an employer or downtown district organization commits to programs that encourage use of ride sharing for employees. These programs might include sponsored shuttles and financial incentives that allow employees to share in savings from smaller parking lots.

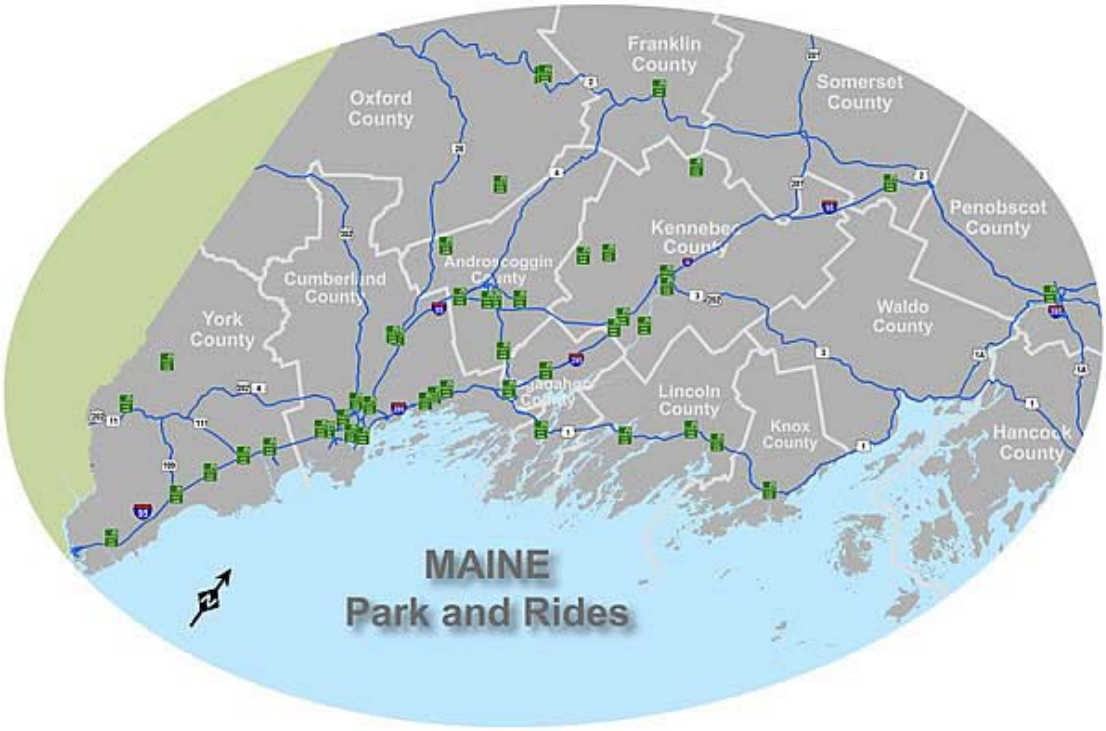


Figure B-6.

Park-and-ride lot system as of 2008

PART 3. Strategies to expand or enhance modes of transportation

3.4 Introduce or expand demand-response transit service

Objective: To provide additional choice in transportation in rural areas and small towns with limited population.

Description: Demand-response transit is transit by appointment, with flexible routes and schedules. Demand-response programs are available to residents in a majority of the state's communities, with a presence in every county of the state. They range from daily to once-a-week service, and from serving wide populations for multiple purposes to serving people with social service needs for specific purposes, such as medical appointments.

Each region of the state has at least one publicly funded transit service provider that operates or contracts for a demand-response system. Organizations that provide demand-response service are:

Aroostook Regional Transportation System (ARTS)
Washington-Hancock Community Agency (WHCA) – social service only
West's Transportation
Penquis Community Action Program
Kennebec Valley Community Action Program – social service only
Coastal Trans
Waldo County Committee for Social Action
Regional Transportation Program
Western Maine Transportation Services (WMTS)
York County Community Action Corporation (YCCAC)

In addition, the Portland region is served by the innovative Independent Transportation Network (ITN), a community and market-based demand-response system for the senior population.

MaineDOT's Analysis of Transit Provision in Maine (April 2002) identifies several opportunities to increase demand-response service, either by expanding the populations covered or the level of service provided. Communities that can benefit from expanded service should consult with the regional provider in their area and address them in their transportation plans.

To be economical, a demand-response system needs to minimize miles traveled per passenger served and to minimize travel time and fuel costs. Therefore, this strategy should be combined with other strategies, including **diversifying land uses** (for example, enabling housing to be within short distances of medical services and shopping) and promoting an **interconnected street system.**

PART 3. Strategies to expand or enhance modes of transportation

3.5 Introduce or expand fixed-route bus service

Objective: To provide additional choice in transportation in areas with expanding urban and suburban populations.

Explanation: Fixed route bus service comes in the form of local service, rural/regional service to major service centers, intercity connections, and feeders to intercity bus lines. Local fixed-route service can be either year-round or, in areas with small year-round populations but a large numbers of visitors, seasonal.

MaineDOT's Analysis of Transit Provision in Maine (April 2002) identifies "townships of transit opportunity." It classifies communities by the types of service that might be considered. A total of 54 communities are in classifications 1 through 4, which may warrant new or expanded fixed-route service. If your community is one of these 54 (or is growing to a point where it might be added to the list), the transportation plan should specifically address the level of current service and the prospect for introducing or expanding it.

If your community is a town with opportunity for fixed-route bus service, several associated strategies are important to consider. These are aimed at making bus service feasible for those with a need or a desire to take advantage of the service. In particular, passengers need to be able to walk to a convenient bus stop, and, once they have reached their destination, they need to be able to walk to a variety of activities.

Thus, compactness is a prerequisite for this service. Enough people have to live within ¼- to ½-mile of bus stops to make the service feasible, and enough activities (for example, places of employment, day care centers, medical and personal services) at the other end have to be within ¼- to ½-mile of each other to serve passengers' needs. This translates into certain minimum levels of density. For residential areas, the minimum residential density is 3 to 5 dwelling units per residential acre. In some communities, a major bus stop may become a focal point around which to create a "transit-oriented development." At the commercial end, the apparent minimum density is a Floor Area Ratio of around 0.7, or 700 square feet of floor area per 1,000 square feet of lot area. Land use ordinances should be tuned to these densities.

Because passengers rely on walking at either end of the trip, interconnection of the residential street system and safe circulation within and between commercial activities also are essential, so that the passengers can choose short paths to bus stops and to different activities. And, in turn, this means attention to pedestrian pathways. For towns preparing for choice in transportation, subdivision and site plan ordinances should require sidewalks in developments within or near designated growth areas

(see **3.1 Expand and Connect the Pedestrian Network**). They should also require, within commercial districts, that provision be made for safe and convenient bus stops and that internal site design includes sidewalks and safe circulation routes between businesses.

A major barrier to public bus systems is paying for operations and maintenance. Under existing financing arrangements, this almost always requires a large local contribution. But in some areas, such as the Mt. Desert Island area and the Bethel area, business contributions make the system possible.

PART 3. Strategies to expand or enhance modes of transportation

3.6 Prepare for passenger rail service

Objective: To provide convenient transportation choice for intercity travel.

Description: Passenger rail can be light, commuter, or intercity rail. Light rail uses electric-powered rail cars along exclusive rights-of-way at ground level, on aerial structures, in subways, or occasionally in streets. Light rail in Maine ended with the demise of trolleys in the early 20th century and has not been reintroduced. Commuter rail can be either electric or diesel propelled. Its purpose is to provide short-distance travel between a central city and suburbs, with multiple runs each day. Maine has no commuter rail.

Figure B-7.

Mixed use redevelopment on Saco Island, site of new train station

Intercity rail operates on heavy rail for longer haul, express train service between large cities, with intermittent stops. Intercity rail was reintroduced in Maine in 2001 between Portland and Boston. MaineDOT's Long-Range Plan calls for extending intercity rail to Yarmouth and Auburn and to Brunswick and Rockland. It is different from commuter rail but many riders are commuters between the principal cities. Intercity rail also is used for seasonal excursions, serving the tourist industry. This currently exists in Maine between Brunswick and Rockland.

For communities along the designated passenger rail corridors (including those used for excursions), the most important element of this strategy is to work closely with MaineDOT's Office of Passenger Services to plan for the future service. Other important steps are:

- Reserve land in the vicinity of future stations for a mix of non-residential development that can serve the needs of passengers boarding and disembarking. High density residential development also may be acceptable if buffered from the inevitable noise and fumes of idling trains. In general, however, it is essential that incompatible uses that eventually will object to the rail not be allowed in the immediate vicinity of the stations. (See **4.2 Allow for operation and expansion of regional transportation facilities**)

- Plan for intermodal transfers – that is, the ability to move from train to taxi, bus, automobile, or ferry and vice versa. Co-locate the train station with terminals for other forms of transit.

Finally, if your community has rail that is not part of MaineDOT's 20-year plan for extending passenger rail, but (a) serves or could serve seasonal excursion trains or (b) the community believes rail may be part of the region's more distant future, take care not to allow land uses that would pre-empt those activities or vision; and encourage grassroots efforts to build support for rail.